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Midwifery

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Essay on  
Menstruation.

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of Virginia

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### On Menstruation.

All women in the enjoyment of good health are subject to a periodical discharge from the uterus, of a fluid resembling blood, which begins at the age of puberty and continues until the approach of old age, recurring once in every lunar month or twenty eight days except when interrupted by pregnancy or lactation; and which from the period of its return is called the menses.

The period at which this discharge first makes its appearance, is so much influenced by

in the morning

by climate and constitution, as well as by the  
mode of life and other adventitious circum-  
stances, that there is almost an end less variety in  
the time of its first accession in different climates  
and different individuals. The early appearance  
of the menses is always in proportion to the warmth  
of the climate; and hence in Greece and other hot  
countries women are said to menstruate so early  
as the age of eight or nine years, while in the  
colder and more northern climates menstruation  
does not take place sooner than the eighteenth  
or twentieth year. And in Lapland it is even  
said only to occur in the summer season.

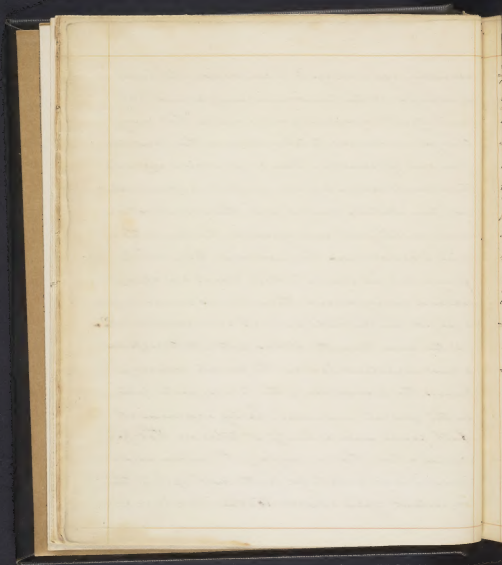
In the United States however and other climates  
of a moderate temperature, the menses begin to flow  
about the twelfth or fourteenth year, sooner or later  
according to the individual constitution, the habit  
mode of life &c.

The time however at which they do  
appear, whether it be at an earlier or a more

\* See Lammie's Introduction to the practice of mid-  
wifery - page 78 -

advanced age is always to be considered the period  
of puberty - At this time, women having arrived at  
maturity, Dr. Benman very well remarks "that many  
changes are observed to take place in their constitution  
and appearance;" Their complexion is improved,  
their countenance is more expressive and animated,  
their attitudes graceful and their conversation  
more intelligent and agreeable; the tone of their  
voice becomes more harmonious, their whole  
frame but particularly their breasts are expanded  
and enlarged, and their minds are no longer  
engaged in childish pursuits and amusements.

At the same time, the uterus destined to perform  
a most important part in the female economy  
towards the procreation of the species, participates  
in the general revolution; having acquired its  
full form and activity it takes on that pecu-  
liar action that is necessary to prepare and  
preserve it in a state fit for the discharge of the  
important office assigned to it - This action inv





perfectly performed at first, is generally attended  
by a train of symptoms denoting general febrile  
action, with pain in the back, loins & head, togeth-  
er with flatulency and other hysterical affections of  
the stomach and bowels; which are relieved  
by the Catamenial discharge that now takes place  
for the first time; which flows in small quantity  
and is but imperfectly formed, appearing for the  
most part colourless, resembling mucus, or but slight-  
ly tinged with red. Nor does its appearance denote  
a perfect action in the uterus, until several peri-  
ods; when the discharge assumes a dark brown  
colour; and the act of menstruation is hence-  
forth unattended by any indisposition, generally,  
except a slight pain in the back with some  
degree of languor.

The same general causes which have  
been said to operate in influencing the first  
appearance of the menses, operate so powerfully  
in regulating the quantity discharged, as well

A New Providence introduced here to the first to regenerate & enlighten  
- page 76 -

as the time required for the evacuation of each  
period; that we find the quantity varying in  
Animals of extreme degrees of heat and cold, from  
eight ounces to two ounces; and the periods lasting  
from only a few hours to ten days or longer;  
And in our climate where the temperature is  
at a medium between the two extremes, there  
exists a great variety both with respect to the  
quantity discharged and the time it lasts,  
not only in different constitutions but in the  
same woman at different periods, according  
to circumstances - But as a general rule it may  
be remarked that women under equal circum-  
stances in this country discharge from four  
to six or eight ounces during each period which  
commonly continues from four to six days.

As women advance in years, and the  
vigour of their constitutions begins to decline,  
and they are no longer capable of bearing  
children, the catamenial discharge, no



be, yet useful, ceases to flow - and the period  
of its secretion is always regulated by the period  
of its origin in commencement. For in the  
warmer climates where women arrive to ma-  
turity at the early age of eighteen since they  
necessarily begin to secrete at an early hour  
and therefore cease to menstruate before  
the age of forty, while in those countries where  
women do not menstruate sooner than the  
eighteenth or twentieth year, the menses  
continue until the age of fifty or even la-  
ter. But in the United States, the same medi-  
um that prevails between the extremes in the  
beginning of the menses, is also observed in  
their cessation, which takes place generally  
about the fortieth or forty-fifth year.

As the menses have always been  
considered peculiar to the female sex  
and confined to the female sex, no doubt  
existing in the opinion of man, it became



a subject of interesting enquiry at a very early  
period, to account for this singular dissimilarity  
which <sup>now exists</sup> ~~is~~ to be observed in connection with the gene-  
ral wealth of mankind, as it has induced  
the supposition that all the diseases to which the  
lower subject <sup>TAUTUM</sup> ~~is~~ to be traced to some irregular-  
ity or interruption in its circulation; and  
the enquiry has been prosecuted with great  
zeal, in all ages down to the present time.  
And with a view to this investigation the  
question that interested itself was to  
ascertain the precise source from which  
it issued; and on this subject a controversy  
of persons has been entertained: some have  
believed it to proceed from the lungs, the  
liver, the spleen, while others have maintained  
that it emanates from the vessels of the  
pancreas. many experiments and observations  
have been alleged in support of each opi-  
nion, but as the proofs in support of the former





are considered as to that the question is undoubted at this day, it would seem unnecessary to say any thing on the subject here, as the only fact which is the subject of the present inquiry, pregnancy, is so different from the others to be the cause of it. This however it may be asked, that the uterus does sometimes become enlarged even during the state of pregnancy, and therefore must proceed from the uterus; but this position does not at all involve the general position, for in the very few instances in which such an enlargement does take place, it is to be considered entirely accidental; and by no means of the same nature as the menstrual discharge, which is now clearly ascertained to be the fact.

If however additional proofs were necessary to establish the fact, the observation of Vesalius, Peyer, Mead, &c. &c. and others afford us ample testimony, for they all, according

\* See letter by P. H. H. in the series of papers  
under the title page 14\*

to Dr. Astruc declare they have seen the men-  
strual flow, from the surface of the uterus on  
its own, who afforded an opportunity of  
examining the part because they had a  
descender of the whole body of the uterus,  
even to the extremity of the vagina, to which  
the two last add, that not a drop of blood  
flowed from the vagina, of which they could  
see the whole circumference in dissection  
to which as we are informed, & the same author,  
Wagener, has found "in all the observations  
he has made on women who were one of  
the time of their menses, or a few days af-  
ter having had them, that the surface  
of the uterus was marked with a great  
number of bloody spots, but that there  
appeared nothing like it in the vagina"

Since then, the fact had been proven to demon-  
stration, that the mounds do proceed from  
the vicinity of the Mounds: it has been deemed of

\* Named Lectures.

sufficient importance by some to extend the  
investigation to the view to determine whether  
they are discharged from the system of veins  
or return and how far a difference of opinion  
has prevailed; & others warning the com-  
missioners to beware of them discharged from veins  
and founds his opinions on their claims which  
he says is never and often back such as  
is that of the veins; the theory is "he says" that  
when it goes top by top is equal to the  
manner of that which comes from the veins.

Indisposition to this Dr Wm Hunter has ~~also~~  
received that he had seen the monster proceed  
from the cut long extremities of the arteries  
and relates that was published\*. But as we  
are to consider the monster a dissection, and as  
the ultimate assignment of the vessels, certainly  
a point is but comparatively unimportant even at the  
present day the question must remain in  
some doubt, until a more minute dissection



With maturity, with experience, to determine the  
source, and at present I will only venture to  
suggest that it is neither from arteries or veins,  
nor from an abstruse dot of morbid matter,  
but from the vessels and nerves of the

With respect to the causes of the men-  
strual flux, a multitude of opinions have been  
entertained, and remarkably we find in differ-  
ent ages it has been ascribed to the influence of  
the Moon, to a ferment in the blood, to a putre-  
faction either general or local, and lastly to a secret-  
ory action of the uterus.

The doctrine of lunar influence had its  
origin in the remotest ages, when the clouds of  
superstition and ignorance enveloped the  
human understanding, and obscured the  
way to investigation and research; and when  
a chimerical analogy was supposed to subsist  
between the tides of the ocean and the fluids  
of the human body. And as the rising and





flowing, if the tides were supposed to be regulated by the phases of the moon, the actions of this doctrine made little assistance in ascribing the flow of the moon to the same cause.

We consider this doctrine must necessarily imply that all women under the influence of this general cause should menstruate at the same times, and as this was observed not to be the case, but that they menstruated in all stages and periods of the moon without regard to its changes; and, farther, that this cause universal in its operation, should likewise have had some similar effect on men, which was also observed not to be the fact, the idea was soon abandoned as inadequate to the explanation of the fact, and now maintains an equal standing with the ancient custom of curing noctures in the intermenstrual period, by committing to memory and repeating a parcel of long words so long unvariable for the simplicity of their



provenance have than this want of meanings.

The doctrine of a ferment, originated with the knowledge of men now well known by the opposition of the Chemical, Catholic, &c. who attributed all the diseases of the human body to some derangement or morbid condition of the blood, which they believed to be subject to Chemical changes. They supposed that by the presence of some stimulative matter, a violent chemical effluence or ferment was excited in the mass of blood, by which the various vessels were excited, and by a salutary operation, discharging the various matter from their mouths, and thus preserving the system from its dangerous influence. The philosophy of this doctrine is rendered sufficiently obvious by the light that has been thrown on the animal economy, by the present improvement of physiological science, by which it is made evident that no such chemical

\* See his note to Alexander - page 279

action or ferment can take place in the  
blood of the living body, & Howard therefore  
on late principles, the doctrine soon gave way  
to that which maintained the menses to  
be the consequence of a plethora, which was  
advocated by the highest authority, was uni-  
versally received and prevailed for a long  
time without opposition, until the theory  
of secretion was suggested, and where this had  
its origin it is difficult to ascertain. Professor  
Chapman says it has been very generally ascribed  
to the celebrated Mr Hunter; but, he continues, the  
evidence of his claims to it is exceedingly slender.  
The only trace of it, which we can discover in his  
writings, is a vague expression in a paragraph  
of his *Lectures on the Blood*\* where he says "In healthy  
menstruation the blood which is discharged  
does not coagulate in the unhealthy or irregular  
it does. The healthy menses therefore show a  
peculiar action of the constitution; and it

\* Vol 1<sup>st</sup> page 24. Phil. Acad.

"is most certainly an *Excretion* & not a *Secretion*" -  
and indeed he is right. I afterwards however, con-  
-sidering also, Sympson, he furnished an extract  
from his lectures to be furnished in *Wharton's*  
*Medicine*, in which he says "the blood discharge  
is in its nature & action is similar to  
blood taken from a vein of the same person,  
from the fact that it is separated by an accident in any  
other part of the body; but is a species of blood  
changed, degenerated, or thrown off from the  
common mass by an action of the vessels of  
the uterus, in a secret similar to secretion,  
by which action the blood having lost its  
vital principle does not coagulate."

Sympson himself speaks of menstruation as having  
been supposed by some to be the first who  
considered the uterine mass a secretion; but  
he remarks that Boerhaave at an earlier date  
described of the uterus as a gland, and of course  
he supposed considered the menses a secretion

\* -cc -m -p -s -t -u -v -w -x -y -z



fluids - and we find Galen in his notes on  
the prelections Academicæ of Boerhaave, speaking  
of the source of the venues, using these words, viz,  
"Videtur quod in venâ radium demonstrat  
utrum naturalis organismus hepatis locum  
est" by which it plainly appears, that that  
time considered as a secretion, altho' he  
has since maintained a very different opin-  
ion. Doubtful however as may be the  
origin of this theory, it is certainly the only  
one that appears consistent with the general  
sense of the animal economy, and I shall there-  
fore undertake to show, why it seems the more  
natural discharge not to extend on a pletthoric  
but rather to be considered the result of a secre-  
tory action in the stomach.

In the first place, if this discharge de-  
pended on a pletthoric condition of the system  
and was intended to relieve the body  
from the weight of superabundant blood,

\* See *Journal menologien* 9<sup>e</sup> ed. 1811, page 4<sup>e</sup>.

we should only expect to see women of this particular  
=ular habit affected by it - as well as, that some  
who are more frequently affected should have  
been pointed out by nature with some other  
equally efficacious in affording relief from  
the affection & in procuring a more permanent  
cure.

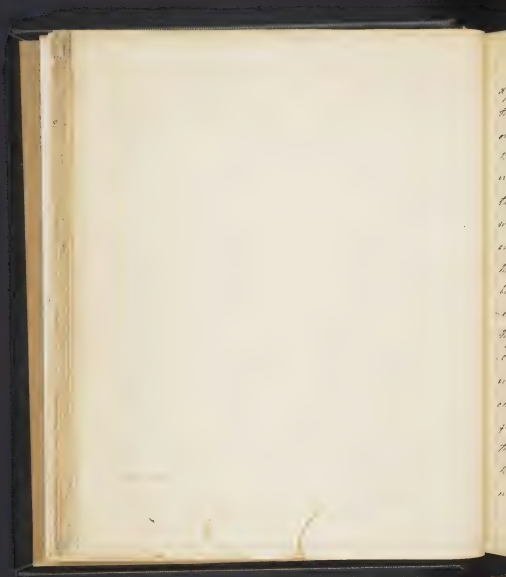
But Dr. Keen, who has been one of the ablest  
advocates in support of the theory of a plethoric  
action, that all women are plethoric; and  
has with much ability and ingenuity attempted  
to prove it to depend on a deficiency of perspi-  
ration, which he says is the case in women,  
and which he ascribes to a languid circula-  
tion and consequent debility; to their tempera-  
ment which he says is moist & warm; and to a life spent at home and not much  
exposed to labour. But to this it is to be objected  
that women of all temperaments, whether moist  
or dry, of a lax or rigid fibre, whether inclined  
as some are, to hard labour and active exer-



case: or accustomed to inactivity, ~~and~~ a more  
luxurious mode of life are all liable to this  
discharge; and so nearly alike both with re-  
spect to time and quantity, as at once to refute  
the idea of its depending wholly on these acci-  
dental causes.

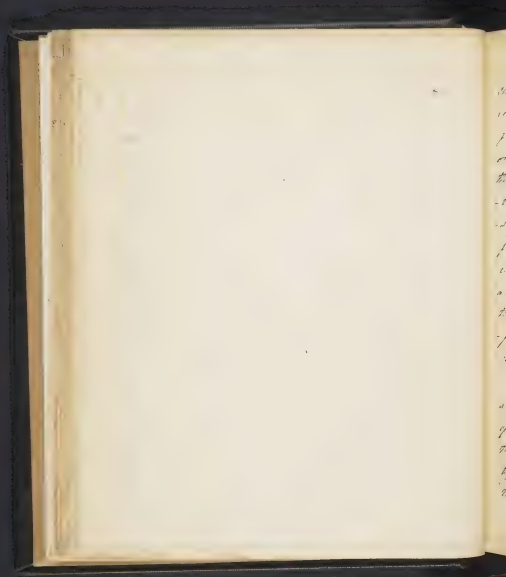
The vicarious discharges of blood which  
sometimes take place, from the lungs, the nose,  
and other parts of the body, during a suppression  
of the menses, have been adduced in support  
of a phlogiston, and would a priori, appear to  
afford arguments of much weight in its fa-  
vour; but upon a closer investigation we shall  
find that they are applicable on other grounds  
much more consistent with the general  
Principles of the Menstrual Economy.

Such is the sympathy known to exist through-  
out the whole system, and so intimately are the  
various parts of the body connected, by a chain  
of associated actions, that they seem mutually



dependant on each other; so much so that if, by  
the interruption of the due performance of any  
one part, a single vessel in this series is broken,  
the whole is thrown into a state of disorder and  
irregularity; and, <sup>the</sup> some other part, by sympathy  
takes on such action as tends to the relief of the  
whole. Thus if a man by any accidental means,  
entirely independent of phtoria, is affected with  
the hemorrhoids, they, by their gradual approach,  
become so intimately interwoven with the gen-  
eral operations of the animal machine, that  
they cannot be suddenly suppressed without ex-  
citing some disorder in the constitution,  
unless it is relieved by a discharge from some  
other part, which is, under these circumstances  
generally observed to take place - And now  
that this discharge is not referable to a phtoric  
habit is clear, since the original discharge was  
not occasioned by such a habit.

Up then a part of the body which is not





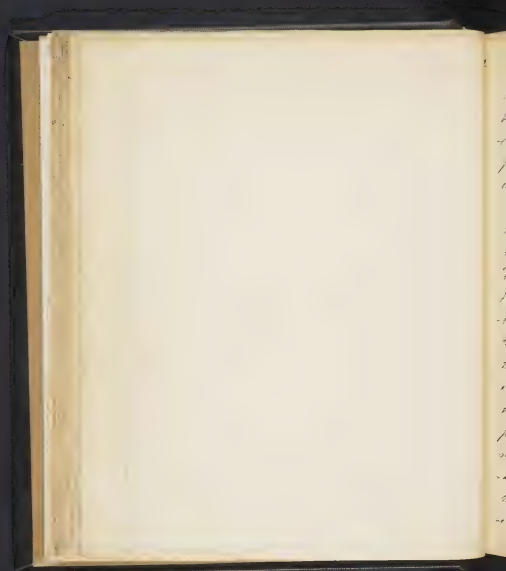
is actuated for any particular way over the  
rest is thus capable of establishing what was at-  
first a morbid action afterwards as a salutary  
one, which <sup>becomes</sup> blended with the whole as to  
throw them all into disorder by its interrup-  
tion; what may we not expect to be the con-  
sequence of the derangement of the natural  
function so great so important as the Menstrues;  
which is known to exert such wide dominion  
and universal control over the operations of  
the female economy, that it has even been sup-  
posed to be sole cause of all the distinguishing  
characteristics of the female sex.

These discharges then are not to be considered  
as the relief of a plethora by the mere evacuation  
of blood, but as the effect of that action which  
the uterus is incapable of exerting, and which  
by the powers of the System has been translated  
to the part from which the discharge proceeds.  
If the menses were occasioned by a Plethora

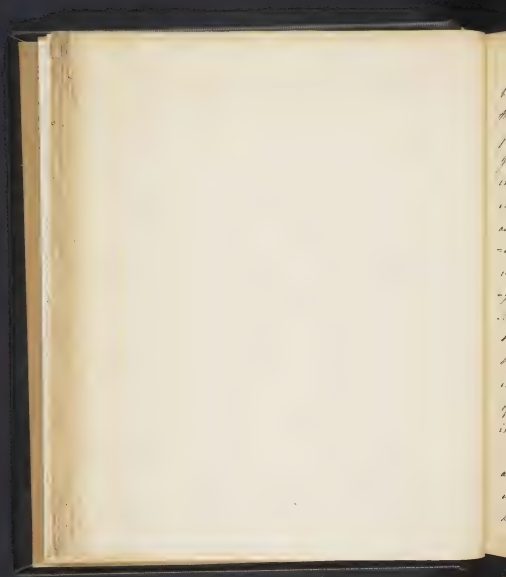


and this plethora could be relieved by an evacuation of blood from any other part of the body, a quantity of blood equal in amount to the discharge of each menstrual period drawn from the same at the beginning of a period should immediately put a stop to the uterine discharge; but it is well known that several times the quantity drawn in this way will have no such effects. And farther it is not reasonable to suppose that this plethora, capable of capturing the vessels of the placenta, should be so universally relieved by a discharge so gradual as the menses are known to flow.

Again the friends of this doctrine say that women are vested with the power of generating more blood than is necessary to their own support, for the purpose of giving nourishment to the fetus during the state of pregnancy; and that in an unimpregnated



the state that it is necessary that the superfluous  
blood should be thrown off in order to pre-  
serve them over health. Among the advocates  
for this opinion stood the illustrious Galen,  
who, as we are informed by P<sup>r</sup>ossius, says  
"That the menses are given to women that  
they may be evacuated for their health's  
sake, and yield nourishment to the embryo  
when supplied by conception." But to this  
I would only reply by asking, why this extra quan-  
tity of blood should be generated at any other  
time than when it is wanted, and that  
the system has the power of supplying her  
exigencies in any particular situation. we  
have innumerable proofs - we see all the  
peculiarities in the fetal structure, that are  
necessary to its existence in utero, immedi-  
ately at birth accommodating themselves  
to the change in its existence, by correspon-  
dent changes - we see the different parts of the



body exerting a wonderful power in supplying  
the necessities of this case in many accidents, as  
for instance from the formation of a new  
joint in case of a laceration. And, as more  
immediately in joint, we see the uterus,  
itself in pregnancy, taking on such action  
as that <sup>the</sup> necessarily requires; it is gradually enlarge  
-ed to accommodate the growth of the foetus,  
which is not effected by distension in conse-  
-quence of the increase in the size of the fo-  
-etus; for its sides, (which, if this were the fact,  
should become thinner in proportion to its  
size,) do in fact increase in thickness; and  
its vessels are now enlarged for the purpose  
of supplying a greater quantity of blood which  
is at this time required.

And again, if we are allowed to call  
analogy to our aid, which if ever admissible  
will certainly apply in the present case; we  
see that Benth animals, which have an equal

*See Hatcher's first Series. Edin. Bibl. 2<sup>d</sup> vol. page 196.*

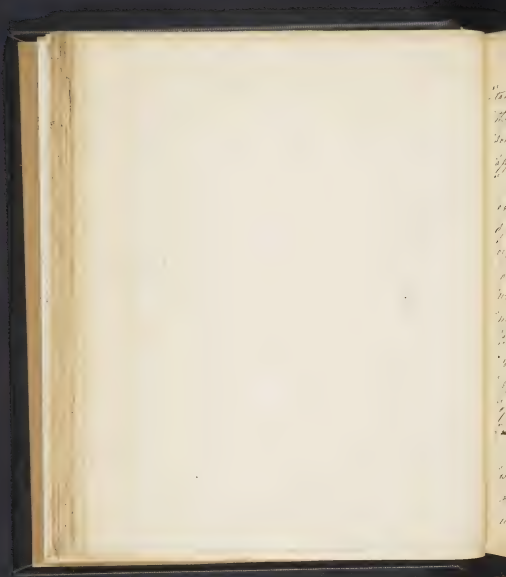


necessity, for a surplus of blood to nourish their  
young, in pregnancy, have no discharge of  
blood in the unimpregnated state - and if they  
have the power of generating this blood  
when necessary only, may we not suppose  
that the human species have the same  
power -

But Haller has declared that "at the age  
"of puberty a plethora occurs in both sexes which  
"in the male is frequently vented by the nose;  
"but which in the female finds a more easy  
"vent downward, directed in part by the weight  
"of the blood to the vessels of the uterus which are  
"now much enlarged and easily distensible,  
"the blood finds an easy passage thro' the soft  
"expanding vessels which open into the cavity of  
"the uterus being there soft resistors than in  
"its return by the veins" & if however this  
were the fact, why do we not see this plethora  
relieved by periodical returns in the Male



as well as in the female sex. That a discharge  
of blood does sometimes occur from the nose  
of males at the period of puberty is very cer-  
tain, but this I consider by no means the  
consequence of a plethoras, but as entirely  
depending on an acceleration in the cir-  
culating system which is occasioned by the  
sudden changes that take place at this period,  
from infancy to puberty. There is a gradual  
increase of size; but immediately after that  
period, in both sexes, the growth of the body  
makes a sudden spring and acquires re-  
doubled strength and activity - And as Caban-  
is remarks, this period induces a general  
alteration in the whole character of human  
existence. New organs enter on actions, new  
senses are felt, a new moral state develops  
itself. It is then that the infant ceases to be a child,  
and that its destination relatively to its species, is  
marked by traits which it is impossible to mis-



take. Among these characteristic circumstances, there are two which appear to be common in some degree to both sexes, and which would appear to merit a particular attention.

We know the sympathetic innervation that exists between all the branches, the paravertebral & venous, & we also know that those parts of the organs of generation which we may consider as the principal focus of their peculiar sensibility, or which appear to imbue on the others life and motion are to be found in cells, glands. So that from the moment when the evolution of these organs commences a general action in all the lymphatic system takes place. The glands of the groin, those of the breasts, of the axilla and of the neck tumefy, and often become painful.

The tumefaction of the glandular system is connected in its turn with peculiar interior migrations and with certain new directions which the blood begins at the same time to take.



"It is certain that the reception of the venereal hu-  
mours which the genital organs prepare and the di-  
rect influence which they exercise by their lively  
sensibility, on all the sanguiferous system, impart  
at that time, to the blood more energy and vitali-  
ty. This fluid becomes more of a stimulant to  
the vessels which contain it. Their tone and par-  
ticularly that of the arteries is considerably aug-  
mented. And ultimately the Circulation assumes  
a character of activity which it had not before -  
These changes so remarkable in the first course of the  
plague, from which all the other fluids are formed must  
necessarily produce a general resolution: each of  
these fluids acquires qualities and acquires also  
increases insensibility and languor: their secretory  
organs and their vessels relax their action."

Hence at this period many changes are ob-  
served to take place in men, at this period their  
voice, which before was shrill and feeble, now  
becomes rough and strong; and that disten-

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gushing characteristic of man, the head begins to appear; but as these changes depend on a degree of excitement imparted to the system by the excitation of the genital organs, they are observed not to take place when these organs are defective. Hence, *ennuchs* have always a shrill voice and are destitute of beards and other marks of the mature man.

At this period too it has been observed that many changes take place in the female sex, the most remarkable of which are the swelling of the mammae, and the establishment of the menses, which also depend on a perfect state of the organs of generation; for it is known that women, whose ovaria have been imperfect or wanting, have neither had an enlargement of the breasts nor the menstrual evacuation; and here we have a strong proof that this evacuation does not owe its origin to a plethora, but is dependent.



out on a particular action of the uterus excited  
by an impression made on it by the ovaries;  
and this appears to me to be made conclusive  
by the fact, that, where the ovaries have been  
originally perfect, and the menses have been  
established; and <sup>they</sup> have afterwards been destroy-  
ed by disease or accident, the menses have  
ceased to flow and never after appeared—

That the menses are a secretion and are  
intended to prepare and preserve the uterus  
in a state fit for conception I believe to be the  
fact, from having observed a discharge always  
to take place from the vagina of several  
domestic animals; (and from which I infer,  
it takes place from all animals,) during this  
season for copulation, which I cannot but  
believe is analogous to the menses in women  
and is intended to give the uterus an aptitude  
for conception— and that the uterus has the  
power of performing this secretion is evident from

\* Hall's first Amer. Jour. Nat. Vol. 1<sup>st</sup> page 195.

its structure, which is highly vascular; and as is  
the case in other glands, the vessels are so arranged  
as to favour this process: the arteries are known to  
be very large in proportion to the veins, and ex-  
tremely convoluted, with thin coats easily disten-  
sible; for as Haller observes "The return of the  
blood is therefore more slow both because the  
flexures of the arteries from the increased afflux  
of the blood become more serpentine and fit  
for retarding the blood's motion; and likewise  
because it now returns with difficulty through  
the veins<sup>\*\*\*</sup> And lastly, this question seems to be  
placed beyond all farther doubt, since it is ascer-  
tained as a fact, that the menses are a fluid  
sui generis, that they are not blood because they  
have neither its coagulability nor colour, and are  
said on chemical analyses to present different  
results from blood. I therefore conclude that the  
Catamenial discharge is the result of a secretory action  
of the Uterus by which it is prepared for conception.

